The Journal of Cell Biology

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July 7, 2003

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Hrs regulates early endosome fusion by inhibiting formation of an endosomal SNARE complex 125

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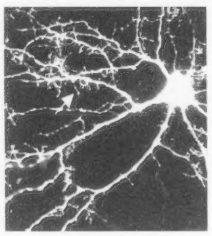
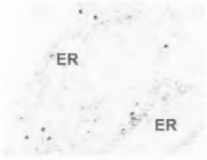


The neuronal specific δ-catenin mediates a balance between process elongation (when Src family kinase activity is reduced) and branching (when Rho is inhibited). See page 99.



Bax (gold particles) and Bak localize not only to mitochondria but also to the ER where they can intiate a parallel pathway of capsase activation and apoptosis. See page 59.

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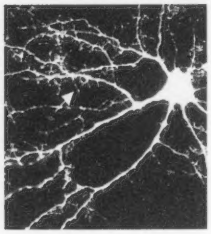

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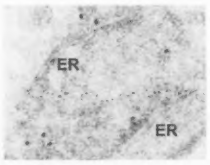

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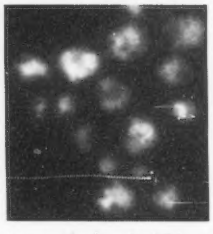

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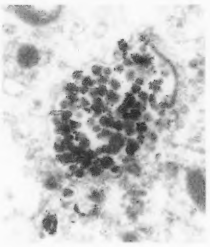
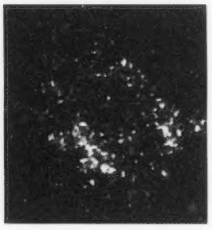


Infectious HIV-1 particles assemble in macrophage endosomes. See page 443.



Hrs (blue) initiates the formation of multivesicular bodies by recruiting the ESCRT machinery (red) to endosomes (green). See page 435.

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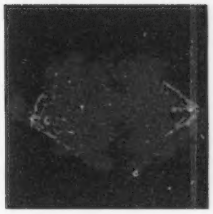

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Cells lacking CENP-E divide despite the presence of a few polar-attached chromosomes that attract the checkpoint protein Bub1 (green). See page 551.

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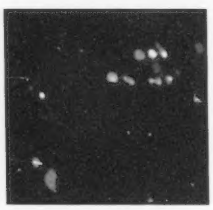

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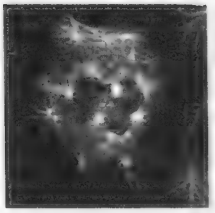
[illegible] Moon



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Overexpressed centrosomin (CNN; yellow) nucleates multiple microtubule asters (green) by linking γ-tubulin to Aurora-A kinase. See page 757.

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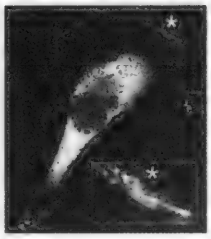
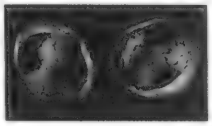


Endo180 (red) colocalizes with uPAR (green) and helps it to direct cell migration. See page 789.



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Differential αv integrin–mediated Ras-ERK signaling during two pathways of angiogenesis 933

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- We can deplete it, we have the technology 958
- When nuclear proteins go mitotic
- The glue that builds bristles
- More order in DNA
- Finding the axon

N. LeBrasseur

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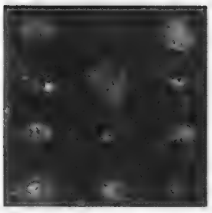
- When is a virus an exosome? 960
- Centromere errors get chewed out
- Survival is sweet
- A daughter's size is not critical
- Pulling to the protease

W.A. Wells



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RNAi inhibition of 90 actin-regulating proteins and 26 motors revealed various phenotypes during lamella formation and cell division, respectively. See pages 1003 and 1079.

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PI3P signaling regulates receptor sorting but not transport in the endosomal pathway 971

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The roles of microtubule-based motor proteins in mitosis: comprehensive RNAi analysis in the *Drosophila* S2 cell line 1003

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NuSAP, a novel microtubule-associated protein involved in mitotic spindle organization 1017

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Real-time single cell analysis of Smac/DIABLO release during apoptosis 1031

M. Rehm, H. Düßmann, and J.H.M. Prehn

Microtubules provide directional cues for polarized axonal transport through interaction with kinesin motor head 1045

T. Nakata and N. Hirokawa

The interaction of tropomodulin with tropomyosin stabilizes thin filaments in cardiac myocytes 1057

R.E. Mudry, C.N. Perry, M. Richards, V.M. Fowler, and C.C. Gregori

Long continuous actin bundles in *Drosophila* bristles are constructed by overlapping short filaments 1069

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Molecular requirements for actin-based lamella formation in *Drosophila* S2 cells 1079

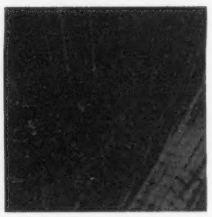
S.L. Rogers, U. Wiedemann, N. Stuurman, and R.D. Vale

Direct signaling by the BMP type II receptor via the cytoskeletal regulator LIMK1 1089

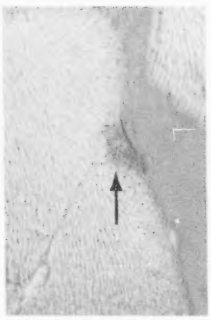
V.C. Foletta, M.A. Lim, J. Soosairaiah, A.P. Kelly, E.G. Stanley, M. Shannon, W. He, S. Das, J. Massagué, and O. Bernard

Importance of extra- and intracellular domains of TLR1 and TLR2 in NFκB signaling 1099

F. Sandor, E. Latz, F. Re, L. Mandell, G. Repik, D.T. Golenbock, T. Espevik, E.A. Kurt-Jones, and R.W. Finberg



Thin filaments (green) are lost if Tmod1–tropomyosin interactions are disrupted (left). See page 1057.



Myostatin (arrow) keeps muscle stem cells quiescent by preventing the G1 to S progression. See page 1135.

The conditional inactivation of the β-catenin gene in endothelial cells causes a defective vascular pattern and increased vascular fragility 1111

A. Cattelino, S. Liebner, R. Gallini, A. Zanetti, G. Balconi, A. Corsi, P. Bianco, H. Wolburg, R. Moore, B. Oreda, R. Kemler, and E. Dejana

Site-specific inductive and inhibitory activities of MMP-2 and MMP-3 orchestrate mammary gland branching morphogenesis 1123

B.S. Wiseman, M.D. Sternlicht, L.R. Lund, C.M. Alexander, J. Mott, M.J. Bissell, P. Soloway, S. Itohara, and Z. Werb

Myostatin negatively regulates satellite cell activation and self-renewal 1135

S. McCroskery, M. Thomas, L. Maxwell, M. Sharma, and R. Kambadur

Juxtaparanodal clustering of *Shaker*-like K^+ channels in myelinated axons depends on Caspr2 and TAG-1 1149

S. Poliak, D. Salomon, H. Elhanany, H. Sabanay, B. Kiernan, L. Pevny, C.L. Stewart, X. Xu, S.-Y. Chiu, P. Shrager, A.J.W. Furley, and E. Peles

Association of TAG-1 with Caspr2 is essential for the molecular organization of juxtaparanodal regions of myelinated fibers 1161

M. Traka, L. Goutebroze, N. Denisenko, M. Bessa, A. Nifli, S. Havaki, Y. Iwakura, F. Fukamauchi, K. Watanabe, B. Soliven, J.-A. Girault, and D. Karagogeos

The Journal of Cell Biology

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– News –

In This Issue

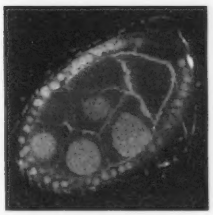
- Getting lamin B1 processed and organized 1178
- How to block botox
- NgCAM takes a scenic route to the axon
- A long version of Short stop
- Pop goes the acrosome

A.W. Dove

Research Roundup

- Evolution steps back 1180
- Translocon: don't pass me by
- Centrosomes lead stem cell orientation
- Grow wings for a limited time only
- Keratin for supple cells

N. LeBrasseur



On the Cover

A plakin-containing isoform of Short stop (Shot/Kakapo) localizes to adherens junctions and is essential for epidermal integrity. Cells lacking it (top) become bilayered. See page 1305.

– Research Articles –

Reports

Stored elastic energy powers the 60-μm extension of the *Limulus polyphemus* sperm actin bundle 1183

J.H. Shin, L. Mahadevan, G.S. Waller, K. Langsetmo, and P. Matsudaira

Compartmentalization of integrin α6β4 signaling in lipid rafts 1189

L. Gagnoux-Palacios, M. Dans, W. van't Hof, A. Mariotti, A. Pepe, G. Meneguzzi, M.D. Resh, and F.G. Giancotti

Articles

Bloom syndrome cells undergo p53-dependent apoptosis and delayed assembly of BRCA1 and NBS1 repair complexes at stalled replication forks 1197

A.R. Davalos and J. Campisi

Sfi1p has conserved centrin-binding sites and an essential function in budding yeast spindle pole body duplication 1211

J.V. Kilmartin

A carboxyl-terminal interaction of lamin B1 is dependent on the CAAX endoprotease Rce1 and carboxymethylation 1223

C.P. Maske, M.S. Hollinshead, N.C. Higbee, M.O. Bergo, S.G. Young, and D.J. Vaux

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Articles (cont.)

Direct measurement of Gag–Gag interaction during retrovirus assembly with FRET and fluorescence correlation spectroscopy 1233

D.R. Larson, Y.M. Ma, V.M. Vogt, and W.W. Webb

Functional interaction of chloroplast SRP/FtsY with the ALB3 translocase in thylakoids: substrate not required 1245

M. Moore, R.L. Goforth, H. Mori, and R. Henry

Peroxisome division in the yeast *Yarrowia lipolytica* is regulated by a signal from inside the peroxisome 1255

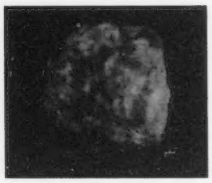
T. Guo, Y.Y. Kit, J.-M. Nicaud, M.-T. Le Dall, S.K. Sears, H. Vali, H. Chan, R.A. Rachubinski, and V.I. Titorenko

RhoA/ROCK regulation of neuritogenesis via profilin IIa–mediated control of actin stability 1267

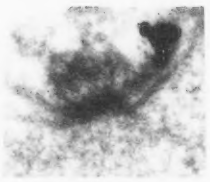
J.S. Da Silva, M. Medina, C. Zuliani, A. Di Nardo, W. Witke, and C.G. Dotti

EphA kinase activation regulates HGF-induced epithelial branching morphogenesis 1281

H. Miao, C.H. Nickel, L.G. Cantley, L.A. Bruggeman, L.N. Bennardo, and B. Wang



An integrin defective in raft localization can still trigger the formation of hemidesmosomes, but not a mitogenic response. See page 1189.



Sfi1p (immunogold staining) localizes to the half bridge of the budding yeast spindle pole body, and its repeated Cdc31p-binding domains may explain the contraction or elasticity of this structure. See page 1211.

Synaptotagmins I and II mediate entry of botulinum neurotoxin B into cells 1293

M. Dong, D.A. Richards, M.C. Goodnough, W.H. Tepp, E.A. Johnson, and E.R. Chapman

Maintaining epithelial integrity: a function for gigantic spectraplakin isoforms in adherens junctions 1305

K. Röper and N.H. Brown

Uncovering multiple axonal targeting pathways in hippocampal neurons 1317

D. Wisco, E.D. Anderson, M.C. Chang, C. Norden, T. Boiko, H. Fölsch, and B. Winckler